

Claims

1. Communication terminal (11) comprising a housing (12) carrying therein a radio antenna element (27), a speaker (16), and a chamber (21) acting as an
5 electromagnetic resonance cavity for the antenna and as an acoustic resonance cavity for the speaker, **characterised in** that said speaker is mounted inside said chamber and is coupled to the outside of said housing through a sound outlet (17).
2. The communication terminal as recited in claim 1, **characterised in** that it
10 comprises a user interface (13,14) on a front side (20) of the housing, and in that said speaker is placed behind said user interface as seen from said front side.
3. The communication terminal as recited in claim 2, **characterised in** that said
15 sound outlet is coupled to said speaker by a sound channel (22) which extends from a channel inlet (28) at the speaker.
4. The communication terminal as recited in claim 3, **characterised in** that said
20 sound channel comprises at least one bent portion (23), such that the sound channel bends around said user interface and extends at said channel front outlet substantially perpendicular to said front side.
5. The communication terminal as recited in claim 3, **characterised in** that said
25 sound channel further has a channel top outlet (19) extending in a substantially longitudinal direction of the terminal at a top side of said housing.
6. The communication terminal as recited in claim 2, **characterised in** that said
user interface is a display (13).
7. The communication terminal as recited in claim 2, **characterised in** that said
30 user interface is a key pad (14).
8. The communication terminal as recited in any of the previous claims,
characterised in that a ground plane (24) defines a wall part of the chamber, through which wall part said sound channel outlet extends.
35
9. The communication terminal as recited in claim 8, **characterised in** that said
speaker is mounted under said ground plane, as seen from said front side.
10. The communication terminal as recited in claim 9, **characterised in** that a first

part of the ground plane is located adjacent to the front part of the housing over the speaker antenna, and a second part of the ground plane is located under the user interface, wherein said first and second parts are connected by a bent portion of the ground plane.

5

11. The communication terminal as recited in any of the previous claims, **characterised in** that said chamber is sealed (26).

10 12. The communication terminal as recited in any of the previous claims, **characterised in** that said chamber has a substantially rectangular box shape.

13. The communication terminal as recited in any of the previous claims, **characterised in** that said antenna element comprises a substantially flat pattern of conductive material on a wall (29) of said chamber.

15

14. The communication terminal as recited in any of the previous claims, **characterised in** that said speaker is devised to convey audio information such as speech to a terminal user.

20 15. The communication terminal as recited in any of the previous claims, **characterised in** that said speaker is devised to act as a ringer by transmitting a predetermined sound signal to bring a user's attention to the terminal.

25 16. The communication terminal as recited in any of the claims 1 - 14, **characterised in** that said speaker comprises a buzzer devised to act as a ringer by transmitting a predetermined sound signal to bring a user's attention to the terminal.

30 17. The communication terminal as recited in any of the claims 1 - 14, **characterised in** that said speaker is a multi mode actuator devised to act as a ringer and as a vibrator by transmitting predetermined sound signals or vibrations to bring a user's attention to the terminal.